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Report Highlights:

TH0114. On July 12-16, FAS conducted visits to palm oil plantations, crushing plants and nurseries in Southern Thailand. The report sheds light on discussions held with different stakeholders on the production, supply and demand outlook for palm oil in 2010.

On July 12-16, FAS conducted a palm oil visit in Southern Thailand. The purpose of the trip was to meet with key palm oil industry and government stakeholders and get a better understanding of the current agricultural situation facing the industry.

Production and Demand Outlook for 2010

In 2010, the Office of Agricultural Economics reported that Thailand's fresh palm production is likely to increase by 15 percent, from 8.03 million tons in 2009 to 9.2 million tons due to an increase in harvested area. However, yields are estimated to decline by one percent to 15.88 tons per hectare due to drier than normal weather conditions. Harvested area has increased, in both existing producing Southern provinces (Chumphon, Suratthani, Krabi, Trang, Nakon Srithamarat) and new emerging growing areas in other regions, from 510,213 hectares in 2009 to 582,006 hectares. With an expected average oil extraction rate (OER) of 16 percent, total crude palm oil production should reach 1.47 million tons, as compared to 1.35 million tons in 2009 (See Table 1). The new harvested areas will more than offset the decrease in yields and OER.

Based on Post's analysis, of the total crude palm oil (CPO) production in 2010 (1.47 MMT), 23 percent or 340,000 tons will be used for industrial consumption of non-biodiesel products, 42 percent or 618,000 tons used for biodiesel production, 31 percent or 455,700 tons for food use, and the remaining four percent or 52,000 tons as exports and stocks. Biodiesel production is the largest driver for CPO demand in 2010 as a change in mandatory production from B2 biodiesel to B3 biodiesel was implemented in June 2010. More details on the government's biodiesel policy and outlook can be found at GAIN report: [Biodiesel Demand and Supply Outlook](#).

Perspectives on the Thai Palm Oil Industry

A. Crude Palm Oil (CPO) Crushers

In 2009, CPO crushing plants purchased 8.03 MMT of FFB in 2009, producing 1.35 MMT of CPO. In the first 5 months of 2010 (Jan-May), the FFB purchased by CPO plants totaled 3.96 MMT, up from 3.45 MMT in the same period of 2009. CPO production in the first five months of 2010 totaled 624,540 tons, as compared to 560,722 tons in the same period in 2009. However, the oil extraction rate (OER) decreased from 16.75 percent in 2009 to 15.77 percent as of Jan-May 2010, and is expected to average out at 16 percent for all of 2010.

CPO crushers admit that under the current market conditions, Thailand is uncompetitive with respect to Malaysia and Indonesia, which has led to some producers to start operations in Indonesia. CPO crushers are incurring in irrational market behavior by currently paying above market clearing prices for FFB. On the week of July 12, crushers were paying 4.00-4.30 baht per kilogram of FFB (\$119-128/ton) and attaining an OER of 15 percent. Under these conditions, CPO production costs were 26.70-28.70 baht/kg (\$793-853/ton CPO), which are below current CPO market prices of 24.50 baht/kg (\$731/ton)

The reasons for this behavior stem from the following:

- 1) The expansion of existing CPO crushers and an emergence of new CPO crushers over the last 5 years have created a milling overcapacity in which crushing plants are competing for a limited supply of FFB by driving prices of FFB above market clearing prices in order to retain market share. In 2005, Thailand had 48 CPO and a total capacity of 1,610 tons of FFB per hour, currently Thailand has 66 CPO crushing plants with a total capacity of 2,320 tons of fresh fruit bunch (FFB) per hour or 11.14 million FFB per annum, which exceeds the current supply of 9.00 MMT by 20 percent.
- 2) Tight supplies enable the farmers to sell low quality product (green fruit, no discount for excess stem, extraneous material, etc) which results in even lower OER.
- 3) Inexistence of a regulatory system such as that in Malaysia, which requires plants to maintain OER targets or lose their operating permits. Millers claim that a similar regulation in Thailand would limit the number of mills by effectively reducing market capacity and allow the surviving firms to implement quality control practices when purchasing FFB.
- 4) Expensive land. Crushers state that owning plantations is advantageous as they're able to secure quality FFB at farm level production costs, however the meteoric rise in land prices, which have doubled and tripled in value in a 10-year period makes it too expensive to expand their holdings, therefore crushers must continue relying on outside FFB to operate.

Despite these limitations, crushers are still able to survive due to the following reasons:

- 1) Several CPO crushers are able to source a portion of FFB from their own plantations. Current production costs of CPO from outsourced FFB are 26,563 baht/ton of CPO, vs. production costs of 11,835 baht/ton of CPO from their own FFB (See table 2).
- 2) Crushers effectively diversify their income from selling byproducts of CPO crushing (i.e., palm kernel oil extraction, palm kernel meal, empty bunches) and/or electric power generation: With byproducts crushers go from a loss of 4,063 baht/ton of CPO to a gross profit of 1,635 baht/ton of CPO for outsourced fruit and from 11,165 baht/ton of CPO to 16,363 baht/ton of CPO using their own fruit (see table 2).
- 3) Some crushers belong to holding companies that have deep pockets and are able to sustain losses during unfavorable conditions.

B. Government

FAS/Bangkok survey revealed that the Government's goals in promoting palm production to meet anticipated oil demand are not being met. A recent increase in palm growing area is likely to be caused by market-driven factors (i.e., good oil palm prices in recent years) rather than by the government efforts on palm plantation promotion.

In 2005, a joint working group from the Ministry of Agriculture and Cooperatives and the Ministry of Energy, "Committee on Biofuel Development and Promotion" (CBDP), set up the national plan to expand the palm growing area by 400,000 hectares from 2008 to 2012 or 80,000 hectares annually, however these targets have not materialized. Additionally, the committee set goals of increasing palm harvest from 19 tons/hectare to 22 tons/hectare, and the crushing rate of crude palm oil from 17 percent to 18.5 percent by 2012.

Slower-than-expected expansion is attributed to the following reasons: 1) Attractive and stable returns from rubber production. 2) Although the RTG, as described in the work plan, would provide low-interest loans to participating oil palm farmers, these have been negligible. 3) The best growing areas are located in the Southern region however land is limited and prices are prohibitive. 4) The government's effort of growing palm in the North and Northeast regions of Thailand has been met tepidly since the regions don't present optimal growing conditions. Currently, these regions have an estimated 2,000-3,000 hectares and should come into production by 2012.

Increasing palm plantings to meet demand has been challenging. As indicated in Table 1, harvested palm area reported by Office of Agricultural Economics (OAE) increased by 33,600 hectares in 2008, 48,700 hectares in 2009, and an estimated 45,000 hectares in 2010, compared to the annual target of 80,000 hectares.

CPO crushers and officials of the Bank of Thailand discussed the need for the Thai Government to adjust its import regime on CPO and refined palm oil if the Thai government remains steadfast in requiring compulsory use of B5 by 2011, as it will need to import these products for biodiesel feedstock for as domestic production is not sufficient. Under the ASEAN Free Trade Area (AFTA) agreement, Thailand must remove tariff and tariff-rate-quota for nearly all products, including palm oil products, imported from other ASEAN members. However, fearing that this move might affect domestic producers from imports of Malaysian and Indonesian CPO due to their competitive advantage, the Thai Government has not implemented AFTA in its entirety for CPO imports and is pondering measures to restrict CPO imports such as requiring import licenses, and appointing a government-owned entity, the Public Warehouse Organization, to monopolize the imports which would subject imports to burdensome and restrictive requirements.

C. Krabi Oil Palm Farmer Cooperative Federation (KOPFCF)

Our team met with the Manager of KOPFCF. The federation comprises 26 palm cooperatives with approximately 15,000 palm farmers that average farm size of 3.3 ha. The federation owns a CPO mill with a capacity of 45 tons FFB per hour. In 2009, it processed 247,000 tons FFB and projects to process 290,000 tons of FFB in 2010. It also generated a profit of 38 million baht (\$1.13 million) in 2009 and an estimated 120 million baht (\$3.58 million) in 2010.

This success belies the supposed inability of the other crushers' inability to deal with the low-quality FFB problem. The federation applies rewards and penalties in order to improve the quality of fruit delivered to the mill. In addition to paying ex-mill prices in line with those paid by competing crushers, the federation provides an incentive of 150 baht (\$4.50) for each ton of fruits that meet their superior quality standards (ripe and free of extraneous materials) and rejects fruits that don't meet minimum standards. In addition, it provides at the end of each quarter, a bonus of 50 (\$1.5) per ton of fruit delivered to members that have consistently provided superior quality fruit. Due to this effort, the mill's OER has increased from 16.65 percent in 2009 to 19.18 percent by June 2010, reducing their production costs significantly by 25 percent.

Conclusion

Thailand's CPO industry faces competitive issues in the region. Under a scenario in which Thailand fully

implements AFTA and a market glut, Thailand would be at a disadvantage with Indonesia and Malaysia which are much more efficient producers. In light of this, it's in Thailand's interest to address its competitiveness by increasing FFB productivity and improve fruit quality to obtain higher OERs. Another issue that comes to light is the rapid increase of land prices in the palm growing areas, which has led to a number of players to enter the marketplace in a highly leveraged fashion, which could end up badly if interest rates increased significantly without the corresponding increase in prices.

However, the overall situation looks promising due in part to good world oil prices and the government's aggressive biodiesel policy, which in itself is an indicator that domestic demand will remain strong as domestic supply wouldn't meet demand in the medium term. In addition, the government's successful attempts of fending off full implementation of the AFTA could be a harbinger of practices that could ensue if prices face downward pressure.

Table 1: Thailand: Production, Supply and Demand for Crude Palm Oil from 2006-2010

Marketing Year Begin	2006 01/06	2007 01/07	2008 01/08	2009 01/09	2010 01/10
Area Planted	473	512	547	600	660
Area Harvested	380	426	462	510	580
Trees	0	0	0	0	0
Beginning Stocks	42	167	46	141	50
Production	1170	1050	1540	1345	1470
MY Imports	30	0	28	7	50
MY Imports from U.S.	0	0	0	0	0
MY Imports from the EU	0	0	0	0	0
TOTAL SUPPLY	1242	1217	1614	1493	1570
MY Exports	305	357	288	67	40
MY Exports to the EU	0	0	58	8	8
Industrial Consump for Non-Biodiesel	270	270	290	310	340
Industrial Consump for Biodiesel	20	64	425	576	625
Food Use Dom. Consumption	400	410	420	440	460
Feed Waste Consumption	80	70	50	50	40
TOTAL Dom. Consumption	770	814	1185	1376	1465
Ending Stocks	167	46	141	50	65
TOTAL DISTRIBUTION	1242	1217	1614	1493	1570

Table 2: Cost-Revenue Analysis for CPO Processing

Scenario 1: Acquiring FFB from outside	
Production Cost (Baht/ton of CPO)	
1. Cost of FFB	26,563
(Based on the OER of 16 percent and FFB price of 4,250 baht/ton)	
2. CPO Crushing Cost	1,500
3. Gross Total Cost (1) + (2)	28,063
Revenue (Baht/ton of CPO)	
1. Sales of CPO	24,500
2. Sales of PKO	4,548
(Based on Palm kernel weight = 5% of FFB Oil content in palm kernel = 42% and PKO prices = \$1,050/ton or 34,650 baht/ton)	
3. Sales of palm kernel oil cake	
(Based on PKO cake content in palm kernel = 52% and PKO cake prices = 4,000 baht/ton)	
4. Total Revenue (1)+(2)+(3)	29,698
Gross Margin (Loss) (Baht/ton of CPO)	1,635
Scenario 2: Acquiring FFB from own plantation	
Production Cost (Baht/ton of CPO)	
1. Cost of FFB	11,835
(Based on the OER of 19 percent and FFB production cost of 2,250 baht/ton)	
2. CPO Crushing Cost	1,500
3. Gross Total Cost (1) + (2)	13,335
Revenue (Baht/ton of CPO)	
1. Sales of CPO	24,500
2. Sales of PKO	4,548
3. Sales of palm kernel oil cake	
4. Total Revenue (1)+(2)+(3)	29,698
Gross Margin (Loss) (Baht/ton of CPO)	16,363

End of Report.